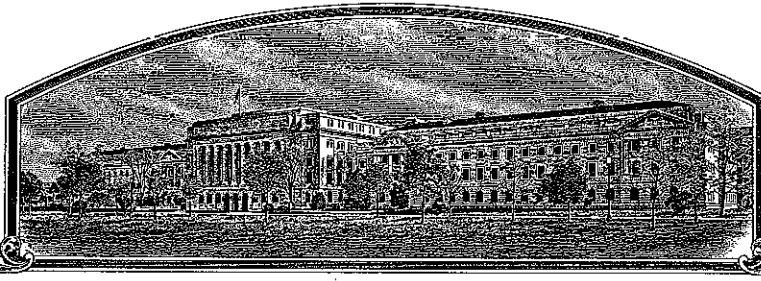


No.

200500049



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

Florida Agricultural Experiment Station (FAES) &
University of Georgia Research Foundation, Inc. (UGARF)

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED DISTINCT VARIETY OF SEXUALLY REPRODUCED, OR TUBER PROPAGATED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF TWENTY YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLACEMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, OR PROPAGATING IT, OR EXPORTING IT, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSES, OR CONDITIONING IT FOR PROPAGATION, OR STOCKING IT FOR ANY OF THE ABOVE PURPOSES, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED IN THE PLANT VARIETY PROTECTION ACT. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

TRITICALE

'Monarch'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington, D.C. this ninth day of June, in the year two thousand and six.

Attest:

Paul M. Zelen

Commissioner
Plant Variety Protection Office
Agricultural Marketing Service

William J. Gorman
Secretary of Agriculture



U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY - PLANT VARIETY PROTECTION OFFICE

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE
(Instructions and information collection burden statement on reverse)

The following statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. 552a) and the Paperwork Reduction Act (PRA) of 1995.

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). Information is held confidential until certificate is issued (7 U.S.C. 2426).

1. NAME OF OWNER Florida Agricultural Experiment Station & University of Georgia <i>Research Foundation</i>		2. TEMPORARY DESIGNATION OR EXPERIMENTAL NAME FL94128-Y1-A8	3. VARIETY NAME Monarch
4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP Code, and Country) Office for Dean of Research University of Florida P.O. Box 10200 Gainesville, Florida 32611-0200		5. TELEPHONE (include area code) (352) 392-1784	FOR OFFICIAL USE ONLY PYPO NUMBER 200500049 FILING DATE DECEMBER 27, 2004
		6. FAX (include area code) (352) 392-4965	
7. IF THE OWNER NAMED IS NOT A "PERSON", GIVE FORM OF ORGANIZATION (corporation, partnership, association, etc.) Experiment Station & Corporation	8. IF INCORPORATED, GIVE STATE OF INCORPORATION NA	9. DATE OF INCORPORATION November 17, 1978	
10. NAME AND ADDRESS OF OWNER REPRESENTATIVE(S) TO SERVE IN THIS APPLICATION. (First person listed will receive all papers) Dr. Ronald D. Barnett North Florida Research and Education Center 155 Research Road Quincy, Florida 32351-5684			F E E S R E C E I V E D FILING AND EXAMINATION FEES: \$3,652.00 DATE 12/27/04 CERTIFICATION FEE: \$768.00 DATE 3/20/2006
11. TELEPHONE (Include area code) (850) 875-7118	12. FAX (Include area code) (850) 875-7188	13. E-MAIL rbarnett@mail.ifas.ufl.edu	
14. CROP KIND (Common Name) Triticale	16. FAMILY NAME (Botanical) Gramineae	18. DOES THE VARIETY CONTAIN ANY TRANSGENES? (OPTIONAL) <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF SO, PLEASE GIVE THE ASSIGNED USDA-APHIS REFERENCE NUMBER FOR THE APPROVED PETITION TO DEREGULATE THE GENETICALLY MODIFIED PLANT FOR COMMERCIALIZATION.	
15. GENUS AND SPECIES NAME OF CROP X Tritiosecale Wittmack	17. IS THE VARIETY A FIRST GENERATION HYBRID? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO		
19. CHECK APPROPRIATE BOX FOR EACH ATTACHMENT SUBMITTED (Follow instructions on reverse) a. <input checked="" type="checkbox"/> Exhibit A. Origin and Breeding History of the Variety b. <input checked="" type="checkbox"/> Exhibit B. Statement of Distinctness c. <input checked="" type="checkbox"/> Exhibit C. Objective Description of Variety d. <input checked="" type="checkbox"/> Exhibit D. Additional Description of the Variety (Optional) e. <input checked="" type="checkbox"/> Exhibit E. Statement of the Basis of the Owner's Ownership f. <input checked="" type="checkbox"/> Voucher Sample (2,500 viable untreated seeds or, for tuber propagated varieties, verification that tissue culture will be deposited and maintained in an approved public repository) g. <input checked="" type="checkbox"/> Filing and Examination Fee (\$3,652), made payable to "Treasurer of the United States" (Mail to the Plant Variety Protection Office)		20. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE SOLD AS A CLASS OF CERTIFIED SEED? (See Section 83(a) of the Plant Variety Protection Act) <input type="checkbox"/> YES (If "yes", answer items 21 and 22 below) <input checked="" type="checkbox"/> NO (If "no", go to item 23) 21. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF CLASSES? <input type="checkbox"/> YES <input type="checkbox"/> NO IF YES, WHICH CLASSES? <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED 22. DOES THE OWNER SPECIFY THAT SEED OF THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? <input type="checkbox"/> YES <input type="checkbox"/> NO IF YES, SPECIFY THE NUMBER 1,2,3, etc. FOR EACH CLASS. <input type="checkbox"/> FOUNDATION <input type="checkbox"/> REGISTERED <input type="checkbox"/> CERTIFIED (If additional explanation is necessary, please use the space indicated on the reverse.)	
23. HAS THE VARIETY (INCLUDING ANY HARVESTED MATERIAL) OR A HYBRID PRODUCED FROM THIS VARIETY BEEN SOLD, DISPOSED OF, TRANSFERRED, OR USED IN THE U. S. OR OTHER COUNTRIES? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF YES, YOU MUST PROVIDE THE DATE OF FIRST SALE, DISPOSITION, TRANSFER, OR USE FOR EACH COUNTRY AND THE CIRCUMSTANCES. (Please use space indicated on reverse.)		24. IS THE VARIETY OR ANY COMPONENT OF THE VARIETY PROTECTED BY INTELLECTUAL PROPERTY RIGHT (PLANT BREEDER'S RIGHT OR PATENT)? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO IF YES, PLEASE GIVE COUNTRY, DATE OF FILING OR ISSUANCE AND ASSIGNED REFERENCE NUMBER. (Please use space indicated on reverse.)	

25. The owners declare that a viable sample of basic seed of the variety has been furnished with application and will be replenished upon request in accordance with such regulations as may be applicable, or for a tuber propagated variety a tissue culture will be deposited in a public repository and maintained for the duration of the certificate.

The undersigned owner(s) is(are) the owner of this sexually reproduced or tuber propagated plant variety, and believe(s) that the variety is new, distinct, uniform, and stable as required in Section 42, and is entitled to protection under the provisions of Section 42 of the Plant Variety Protection Act.

Owner(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

SIGNATURE OF OWNER <i>Ronald D. Barnett</i>		SIGNATURE OF OWNER <i>Wayne H. Smith</i>	
NAME (Please print or type) Ronald D. Barnett		NAME (Please print or type) Wayne H. Smith	
CAPACITY OR TITLE Professor Agronomy	DATE 12-20-04	CAPACITY OR TITLE Int. Dean for Research	DATE 12/17/04

(See reverse for instructions and information collection burden statement)

GENERAL: To be effectively filed with the Plant Variety Protection Office (PVPO), **ALL** of the following items must be received in the PVPO: (1) Completed application form signed by the owner; (2) completed exhibits A, B, C, E; (3) for a seed reproduced variety at least 2,500 viable untreated seeds, for a hybrid variety at least 2,500 untreated seeds of each line necessary to reproduce the variety, or for tuber reproduced varieties verification that a viable (*in the sense that it will reproduce an entire plant*) tissue culture will be deposited and maintained in an approved public repository; (4) check drawn on a U.S. bank for \$3,652 (\$432 filing fee and \$3,220 examination fee), payable to "Treasurer of the United States" (See Section 97.6 of the Regulations and Rules of Practice.) Partial applications will be held in the PVPO for not more than 90 days, then returned to the applicant as unfilled. Mail application and other requirements to Plant Variety Protection Office, AMS, USDA, Room 401, NAL Building, 10301 Baltimore Avenue, Beltsville, MD 20705-2351. Retain one copy for your files. All items on the face of the application are self explanatory unless noted below. Corrections on the application form and exhibits must be initialed and dated. **DO NOT** use masking materials to make corrections. If a certificate is allowed, you will be requested to send a check payable to "Treasurer of the United States" in the amount of \$432 for issuance of the certificate. Certificates will be issued to owner, not licensee or agent.

Plant Variety Protection Office

Telephone: (301) 504-5518

FAX: (301) 504-5291

Homepage: <http://www.ams.usda.gov/science/pvpo/pvpindex.htm>

To avoid conflict with other variety names in use, the applicant must check the appropriate recognized authority and provide evidence that name has been cleared by the appropriate recognized authority before the Certificate of Protection is issued. For example, for agricultural and vegetable crops, contact: Seed Branch, AMS, USDA, 10301 Baltimore Avenue, Suite 401 NAL Building, Beltsville, MD 20705. Telephone: (301) 504-5682 <http://www.ams.usda.gov/lsg/seed.htm>.

ITEM

- 19a. Give: (1) the genealogy, including public and commercial varieties, lines, or clones used, and the breeding method;
(2) the details of subsequent stages of selection and multiplication;
(3) evidence of uniformity and stability; and
(4) the type and frequency of variants during reproduction and multiplication and state how these variants may be identified
- 19b. Give a summary of the variety's distinctness. Clearly state how this application variety may be distinguished from all other varieties in the same crop. If the new variety is most similar to one variety or a group of related varieties:
(1) identify these varieties and state all differences objectively;
(2) attach statistical data for characters expressed numerically and demonstrate that these are clear differences; and
(3) submit, if helpful, seed and plant specimens or photographs (prints) of seed and plant comparisons which clearly indicate distinctness.
- 19c. Exhibit C forms are available from the PVPO Office for most crops; specify crop kind. Fill in Exhibit C (Objective Description of Variety) form as completely as possible to describe your variety.
- 19d. Optional additional characteristics and/or photographs. Describe any additional characteristics that cannot be accurately conveyed in Exhibit C. Use comparative varieties as is necessary to reveal more accurately the characteristics that are difficult to describe, such as plant habit, plant color, disease resistance, etc.
- 19e. Section 52(5) of the Act requires applicants to furnish a statement of the basis of the applicant's ownership. An Exhibit E form is available from the PVPO.
20. If "Yes" is specified (*seed of this variety be sold by variety name only, as a class of certified seed*), the applicant **MAY NOT** reverse this affirmative decision after the variety has been sold and so labeled, the decision published, or the certificate issued. However, if "No" has been specified, the applicant may change the choice. (See Regulations and Rules of Practice, Section 97.103).
23. See Sections 41, 42, and 43 of the Act and Section 97.5 of the regulations for eligibility requirements.
24. See Section 55 of the Act for instructions on claiming the benefit of an earlier filing date.

22. CONTINUED FROM FRONT (Please provide a statement as to the limitation and sequence of generations that may be certified.)

23. CONTINUED FROM FRONT (Please provide the date of first sale, disposition, transfer, or use for each country and the circumstances, if the variety (including any harvested material) or a hybrid produced from this variety has been sold, disposed of, transferred, or used in the U.S. or other countries.)

First invoiced dated December 31, 2003

24. CONTINUED FROM FRONT (Please give the country, date of filing or issuance, and assigned reference number, if the variety or any component of the variety is protected by intellectual property right (Plant Breeder's Right or Patent).)

NOTES: It is the responsibility of the applicant/owner to keep the PVPO informed of any changes of address or change of ownership or assignment or owner's representative during the life of the application/certificate. The fees for filing a change of address; owner's representative; ownership or assignment; or any modification of owner's name is specified in Section 97.175 of the regulations. (See Section 101 of the Act, and Sections 97.130, 97.131, 97.175(h) of the Regulations and Rules of Practice.)

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 1.4 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, sexual orientation, marital or family status, political beliefs, parental status, or protected genetic information. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call 202-720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

Exhibit A

Origin and Breeding History of Monarch

This is a triticales cultivar developed by the University of Florida and the University of Georgia with the University of Florida being the lead institution. It was approved for released in 2003.

Monarch (tested experimentally as FL94128-Y1-A8) resulted from a cross made in the spring 1994 at the North Florida Research and Education Center at Quincy, FL. It has the following pedigree: M93-188/FL87TH4004-3-N3-R1-S1-T1. M93-188 is a line obtained from Dr. Robert Metzger, USDA, located at Oregon State University. M93-188 had the following pedigree: CT583.81//A876/M76-6269. FL87TH4004-3-N3-R1-S1-T1 is a Florida advanced line with the pedigree: Florico/NF117. The NF117 was a winter breeding line from the Noble Foundation at Ardmore, OK. The F1 was grown in Aberdeen, Idaho in the summer of 1994. The F2-F3 generations were grown in bulk (1995-96) with the first selection occurring in the F3. Head selections were taken in the F3 and F5 generations and FL94128-Y1-A8 resulted from bulking a single F6 head row grown in 1999. It was grown in a single observation plot in 2000 and appeared very promising with a good yield and test weight. In 2001 it was entered in the Elite Triticales trial which was grown in Quincy and Marianna in Florida and Plains in GA and a preliminary increase was grown. Across the three locations Monarch averaged 4567 lbs of grain per acre compared to several checks in the trial: AGS 2000 wheat 4558 lbs/A, Florico 4263 lbs/A, Arcia 3393 lbs/A, and Sunland 3296 lbs/A. The Monarch was ranked 6th in yield among the 42 entries across locations. At Quincy Monarch headed two days later than Sunland but was 4 days later in heading at Marianna.

In 2001 Monarch was also included in the Official Georgia Variety Trials. It was ranked 15th for grain yield at Tifton, 5th at Plains, 15th at Midville, and was not in the top group for three location averages. It was included in a wildlife (mainly whitetail deer) preference trial in MS and was rated above all other small grains. Interest has been expressed for this line to use in wildlife food plots.

Monarch has been observed to be uniform and stable across multiple locations from 2001 through 2004 (4 years). This cultivar has been licensed exclusive to Southern Wildlife Seeds and Management, Senatobia, MS.

Monarch has a low frequency of variants that include:

1. Up to 1% taller variants

Exhibit B
Statement of Distinctness of Monarch

Monarch is a novel and distinct variety that is most similar in appearance to Sunland
Monarch is 2-4 days later in heading than Sunland and averages 6-7 inches taller than Sunland.

Plant height in inches

	<u>Monarch</u>	<u>Sunland</u>
Quincy Elite Triticale test 2001	49	44
Marianna Elite Test 2001	48	37
Tifton, Ga 2001	53	47
Plains , Ga 2001	54	46
Midville, Ga 2001	<u>43</u>	<u>34</u>
Mean	49	42

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 2 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, sexual orientation, marital or family status, political beliefs, parental status, or protected genetic information. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, DC 20250-9410 or call 202-720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
SCIENCE AND TECHNOLOGY
PLANT VARIETY PROTECTION OFFICE
BELTSVILLE, MD 20705

EXHIBIT C

OBJECTIVE DESCRIPTION OF VARIETY
TRITICALE

NAME OF APPLICANT(S) Florida Agricultural Experiment Station University of GA Research Foundation	TEMPORARY OR EXPERIMENTAL DESIGNATION FL94128-Y1-A8	VARIETY NAME Monarch
ADDRESS (Street and No. or RD No., City, State, Zip Code, and Country) 1022 McCarty Hall P.O. Box 110200 Gainesville, Florida 32611-0200		FOR OFFICIAL USE ONLY PVPO NUMBER 200500049

PLEASE READ ALL INSTRUCTIONS CAREFULLY: Place the appropriate number that describes the varietal character of this variety in the spaces below. Place a zero in the first space (e.g. 02 or 092) when number is either 99 or less or 9 or less respectively.

1. GROWTH HABIT

1 1 = Spring 2 = Intermediate 3 = Winter

2 Juvenile Plant Growth: 1 = Prostrate 2 = Semi-Prostrate 3 = Erect

1 Photoperiod: 1 = Insensitive 2 = Sensitive

2. PLOIDY

1 1 = Hexaploid 2 = Octoploid 3 = Other (Specify) _____

4 2 2n Chromosome Number

3. MATURITY

2 1 = Very Early 2 = Early 3 = Mid-Season 4 = Late 5 = Very Late

____ Days Earlier Than _____ *

Same as Check _____ *

____ Days Later Than _____ *

4. HEIGHT

4 1 = Dwarf 2 = Semi-Dwarf 3 = Short 4 = Mid-Tall 5 = Tall

____ cm High

____ cm. Shorter Than _____ *

Same as Check _____ *

____ cm. Taller Than _____ *

* Relative to a Commercial Variety Grown in the Same Trial

5. PLANT COLOR AT BOOT STAGE2 1 = Yellow - Green 2 = Green 3 = Blue - Green**6. STEM**1 Anthocyanin: 1 = Absent 2 = Present4 Neck Hairiness: 1 = None 2 = Slight 3 = Moderate 4 = Heavy1 Shape of Neck: 1 = Straight 2 = Wavy 3 = Other (Specify) _____**7. LEAVES**2 Flag Leaf: 1 = Not Twisted 2 = Twisted 3 0 cm Leaf Length (1st leaf below flag leaf)2 Waxy Bloom On Leaf At Boot: 1 = Absent 2 = Present 1 2 mm Leaf Width (1st leaf below flag leaf)2 Leaf Carriage: 1 = Upright 2 = Recurved 3 = Dropping 1 Auricle Color: 1 = Colorless or White 2 = Purple 3 = Other (specify) _____**8. HEAD**2 Density: 1 = Lax 2 = Middense 3 = Dense1 Shape: 1 = Fusiform 2 = Oblong 3 = Clavate 4 = Elliptical 5 = Other (Specify) _____4 Awnedness: 1 = Awnless 2 = Apically Awnletted 3 = Awnletted 4 = Awned1 Awn Color: 1 = White 2 = Yellow 3 = Tan 4 = Brown 5 = Black1 1 cm Head Length 1 6 mm Head Width**9. GLUMES AT MATURITY**1 Pubescence: 1 = Glabrous 2 = Slightly Pubescent 3 = Pubescent1 Color: 1 = White 2 = Yellow 3 = Tan 4 = Brown 5 = Black1 Length: 1 = Short 2 = Mid-Long 3 = Long1 Width: 1 = Narrow 2 = Mid-Wide 3 = Wide2 Shoulder: 1 = Wanting 2 = Oblique 3 = Rounded 4 = Square 4 = Elevated 6 = Apiculate3 Beak: 1 = Obtuse 2 = Acute 3 = Acuminate**10. COLEOPTILE COLOR**1 1 = White 2 = Green 3 = Purple**11. SEED**2 Shape: 1 = Ovate 2 = Oval 3 = Elliptical2 Smoothness: 1 = Smooth 2 = Slightly Wrinkled 3 = Wrinkled3 Brush Area: 1 = Small 2 = Mid-Size 3 = Large2 Brush Length: 1 = Short 2 = Mid-Long 3 = Long Phenol Reaction: 1 = Ivory 2 = Fawn 3 = Light- Brown 4 = Brown 5 = Brown- Black3 Color: 1 = White 2 = Amber 3 = Red 4 = Purple 5 = Black 6 = Other (Specify) _____4 4 GMS Per 1,000 Seed

12. DISEASE (0 = Not Tested 1 = Susceptible 2 = Resistant 3 = Tolerant)

<u>2</u> Stem Rust (Races) _____	<u>2</u> Leaf Rust (Races) _____
<u>0</u> Stripe Rust (Races) _____	<u>0</u> Ergot _____
<u>2</u> Powdery Mildew _____	<u>0</u> Bacterial Stripe _____
<u>0</u> Septoria _____	<u>0</u> Yellow Dwarf _____
<u>0</u> Other (Specify) _____	<u>0</u> Other (Specify) _____

13. DISEASE (0 = Not Tested 1 = Susceptible 2 = Resistant 3 = Tolerant)

<u>0</u> Greenbug _____	Hessian Fly Race:
<u>0</u> Cereal Leaf Beetle _____	<u>0</u> GP <u>0</u> A <u>0</u> B <u>0</u> C
<u>0</u> Other (Specify) _____	<u>0</u> D <u>0</u> E <u>0</u> F <u>0</u> G

14. INDICATE WHICH VARIETY MOST CLOSELY RESEMBLES THAT SUBMITTED

Character	Variety
Plant Tillering	Sunland
Winter Hardiness	Sunland
Area Of Adaptation	Sunland
Seed Shape	Sunland

REFERENCES

L. W. Briggie and L. P. Reitz, 1963, Classification of Triticum Species and Wheat Varieties Grown in the United States, Technical Bulletin 1278, USDA.

W. E. Walls, 1965, A Standardized Phenol Method for Testing Wheat Seeds for Varietal Purity, Contribution No. 28 to the handbook of seed testing prepared by the Association of Official Seed Analysts.

COMMENTS

"EXHIBIT D"**Monarch****A New Early Maturing Triticale Cultivar for Wildlife Food Plots**

Participating scientists: Florida - Ronald D. Barnett, Ann R. Blount, and Paul Pfahler;
Georgia - Jerry Johnson, Barry Cunfer, G. David Buntin, and Dan Bland

This is a new cultivar developed by the University of Florida and the University of Georgia with the University of Florida being the lead institution.

Monarch (tested experimentally as FL94128-Y1-A8) resulted from a cross made in the spring 1994 at the North Florida Research and Education Center at Quincy, FL. It has the following pedigree: M93-188/FL87TH4004-3-N3-R1-S1-T1. M93-188 is a line obtained from Dr. Robert Metzger, USDA, located at Oregon State University. M93-188 had the following pedigree: CT583.81//A876/M76-6269. FL87TH4004-3-N3-R1-S1-T1 is a Florida advanced line with the pedigree: Florico/NF117. The NF117 was a winter breeding line from the Noble Foundation at Ardmore, OK. The F1 was grown in Aberdeen, Idaho in the summer of 1994. The F2-F3 generations were grown in bulk (1995-96) with the first selection occurring in the F3. Head selections were taken in the F3 and F5 generations and FL94128-Y1-A8 resulted from bulking a single F6 head row grown in 1999. It was grown in a single observation plot in 2000 and appeared very promising with a good yield and test weight. In 2001 it was entered in the Elite Triticale trial which was grown in Quincy and Marianna in Florida and Plains in GA and a preliminary increase was grown. Across the three locations Monarch averaged 4567 lbs of grain per acre compared to several checks in the trial: AGS 2000 wheat 4558 lbs/A, Florico 4263 lbs/A, Arcia 3393 lbs/A, and Sunland 3296 lbs/A. The Monarch was ranked 6th in yield among the 42 entries across locations. At Quincy Monarch headed two days later than Sunland but was 4 days later in heading at Marianna.

In 2001 Monarch was also included in the Official Georgia Variety Trials. It was ranked 15th for grain yield at Tifton, 5th at Plains, 15th at Midville, and was not in the top group for three location averages. It was included in a wildlife (mainly whitetail deer) preference trial in MS and was rated above all other small grains. Interest has been expressed for this line to use in wildlife food plots.

Plant Variety Protection will be applied for and a royalty earning stream will be developed. This cultivar has been licensed exclusive to Southern Wildlife Seeds and Management, Senatobia, MS.

FL94128-Y1-A8

A New Early Maturing Triticale Cultivar for Wildlife Food Plots

Participating scientists: Florida - Ronald D. Barnett, Ann R. Blount, and Paul Pfahler;
Georgia - Jerry Johnson, Barry Cunfer, G. David Buntin, and Dan Bland

This is a new cultivar developed by the University of Florida and the University of Georgia with the University of Florida being the lead institution.

It has been a number of years since we have released a triticale variety (Sunland in 1989) and the acreage in triticale continues to be small. We do have some very good material in our program and considerably improvements in yield and adaptation have been made in recent years.

FL94128-Y1-A8 resulted from a cross made in the spring 1994 at the North Florida Research and Education Center at Quincy, FL. It has the following pedigree: M93-188/FL87TH4004-3-N3-R1-S1-T1. M93-188 is a line obtained from Dr. Robert Metzger, USDA, located at Oregon State University. M93-188 had the following pedigree: CT583.81//A876/M76-6269. FL87TH4004-3-N3-R1-S1-T1 is a Florida advanced line with the pedigree: Florico/NF117. The NF117 was a winter breeding line from the Noble Foundation at Ardmore, OK. The F1 was grown in Aberdeen, Idaho in the summer of 1994. The F2-F3 generations were grown in bulk (1995-96) with the first selection occurring in the F3. Head selections were taken in the F3 and F5 generations and FL94128-Y1-A8 resulted from bulking a single F6 head row grown in 1999. It was grown in a single observation plot in 2000 and appeared very promising with a good yield and test weight. In 2001 it was entered in the Elite Triticale trial which was grown in Quincy and Marianna in Florida and Plains in GA and a preliminary increase was grown. Across the three locations FL94128-Y1-A8 averaged 4567 lbs of grain per acre compared to several checks in the trial: AGS 2000 wheat 4558 lbs/A, Florico 4263 lbs/A, Arcia 3393 lbs/A, and Sunland 3296 lbs/A (Table 1). The FL94128-Y1-A8 was ranked 6th in yield among the 42 entries across locations. At Quincy FL94128-Y1-A8 headed two days later than Sunland (Table 2) but was 4 days later in heading at Marianna (Table 3).

In 2001 FL94128-Y1-A8 was also included in the Official Georgia Variety Trials and the results are given in Tables 4-7. It was ranked 15th for grain yield at Tifton (Table 4), 5th at Plains (Table 5), 15th at Midville (Table 6), and was not in the top group for three location averages (Table 7). Based on its performance in Georgia it was not included in the Elite Trial in 2002 or the Georgia State Trials in 2002. But it was included in a wildlife (mainly whitetail deer) preference trial in MS and was rated above all other small grains. Interest has been expressed for this line to use in wildlife food plots. It has been included in numerous trials in 2003 and additional data will be available during the summer of 2003.

We have several acres of this line and will have 100-200 bushels of seed available this summer. We do not expect this line to be a major variety but will likely be used only in wildlife blends. But it will be thoroughly test and if its performance was adequate it might be used as a regular feed grain also. We would have enough seed to turn over some to a company for an increase and allow them to

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get more extensive testing done and plan a marketing campaign so we would like to select a marketing company this year.

Plant Variety Protection will be applied for and a royalty earning stream will be developed. We are planning to release the line exclusively to a single seed company. A name will be selected in conjunction with the selected company.

Table 1. 2001 Elite Triticale Summary, Across 4 Locations, Sorted by Yield

CULTIVAR/ DESIGNATION	Yield Lbs/Acre						Yield Rank						Test Weight Lbs/Bushel			
	Mar	Qui	Plns	QPSB81	4 Loc Av	M	Q	P	81	4L	Mar	Qui	Plns	3 Loc Av		
91142-A19 F8	4051	4058	7755	4410	5069	5	1	1	3	1	50.8	53.1	55.8	53.2		
29ITYN45	3821	3664	6893	4247	4656	6	2	7	5	2	56.3	56.0	57.7	56.7		
90T60-13-B3-03	4339	3344	6815	3975	4618	2	9	9	13	3	52.4	53.1	55.8	53.8		
30ITYN4	3661	3657	6965	4029	4578	9	3	6	11	4	56.3	55.7	57.7	56.6		
91142-A2 F8	3681	3465	6997	4138	4570	7	8	5	8	5	52.4	54.7	56.4	54.5		
94128-Y1-A8 F8	4242	3538	6511	3975	4567	4	5	14	14	6	52.4	52.5	53.1	52.7		
AGS 2000	4286	3509	6434	4002	4558	3	6	15	12	7	58.8	58.6	59.8	59.1		
91142-P1-A1 F9	3090	3485	7088	4165	4457	22	7	3	7	8	51.2	52.5	54.1	52.6		
91236-A12 F8	3652	3286	6761	3948	4412	11	11	10	16	9	49.6	49.6	54.3	51.2		
FL26ITYN153	3403	2621	6829	4792	4411	14	23	8	1	10	52.4	54.1	55.9	54.1		
94128-Y1-A5 F8	3301	3625	6285	4220	4358	16	4	20	6	11	51.8	53.8	53.7	53.1		
89T115-X21-Y1-A3 F9	4417	2224	6321	4111	4268	1	33	19	10	12	49.9	48.6	52.9	50.5		
Florico	3332	2812	6580	4329	4263	15	20	13	4	13	53.7	53.8	56.2	54.6		
91211-W7-Y2-A11 F10	3456	3054	6403	4138	4263	13	14	17	9	14	48.9	49.6	50.6	49.7		
93039-P1-A11 F8	3032	3294	7138	3430	4223	24	10	2	24	15	49.9	52.5	53.1	51.8		
28ITYN13	3511	3192	5926	3975	4151	12	12	25	15	16	52.4	50.9	55.5	52.9		
PFT 701	3245	3185	6403	3757	4147	17	13	16	18	17	56.3	56.3	56.4	56.3		
FL26ITYN11	2902	2981	5817	4628	4082	26	16	27	2	18	53.7	56.0	56.8	55.5		
28ITYN16	3669	2880	6393	3376	4080	8	18	18	25	19	52.4	52.5	56.0	53.6		
92 TO 049-X1-Y2	3100	2991	6589	3349	4007	20	15	12	26	20	53.7	52.5	54.8	53.7		
91144-A20 F8	3654	2297	6629	3294	3969	10	31	11	27	21	51.2	51.8	54.6	52.5		
90076-W1-X1, awnless	3233	2558	6203	3566	3890	18	25	22	21	22	52.4	52.5	54.9	53.3		

Table 1. 2001 Elite Triticale Summary, Across 4 Locations, Sorted by Yield

CULTIVAR/ DESIGNATION	Yield Lbs/Acre					Yield Rank					Test Weight Lbs/Bushel			
	Mar	Qui	Plns	QPSB81	4 Loc Av	M	Q	P	81	4L	Mar	Qui	Plns	3 Loc Av
91168-A11 F8	3047	2952	7029	2124	3788	23	17	4	39	23	51.8	52.5	55.8	53.4
89271-W2-Y2-Z1-A4	2885	2270	6212	3784	3788	27	32	21	17	24	48.6	48.6	52.0	49.7
86T27-E13-G8	3122	2814	6185	2995	3779	19	19	23	30	25	53.7	53.4	56.2	54.4
FL89219-X7-G8	2926	2756	5404	3512	3650	25	21	32	22	26	56.3	57.6	56.8	56.9
PFT215	2614	2604	5740	3594	3638	30	24	28	19	27	57.2	57.9	57.4	57.5
Arcia	2163	2739	5214	3458	3393	33	22	33	23	28	51.2	52.8	52.3	52.1
88T123-E10-5-B1-Y3-Z2-A2	2446	2449	5413	2913	3305	32	29	31	33	29	54.0	53.8	54.3	54.0
Sunland	2776	1835	5577	2995	3296	28	36	29	31	30	57.6	57.9	58.5	58.0
91214-X2-Y2-Z1-A3 F9	2502	2464	4987	3076	3257	31	28	34	29	31	54.7	53.8	55.5	54.7
M98-2084	1767	2439	6126	2668	3250	38	30	24	34	32	52.4	55.0	56.6	54.7
K6045-12, Brazil	3095	2524	5867	1470	3239	21	26	26	41	33	56.3	56.6	58.1	57.0
26ITYN12	2727	1757	5445	2968	3224	29	38	30	32	34	55.0	55.0	57.4	55.8
KT970046p7050	1943	1764	3803	3594	2776	35	37	36	20	35	54.1	55.4	53.4	53.4
M98-1952-2	1876	2103	3884	3240	2776	36	34	35	28	36	52.4	53.4	54.1	53.3
M98-1950-1	1803	2522	3612	2559	2624	37	27	38	35	37	53.7	55.4	53.3	54.1
VN98-4	1951	1449	2859	2559	2204	34	39	40	36	38	42.2	47.4	41.9	43.8
M98-1939	1195	1252	3657	2450	2139	41	42	37	38	39	53.7	51.8	53.8	53.1
Musky	1118	1931	2323	2477	1962	42	35	42	37	40	52.4	56.0	52.7	53.7
M98-1916	1229	1404	3049	1552	1809	40	40	39	40	41	51.2	52.8	50.6	51.5
81-437T SPS, Australia	1309	1254	2509	1007	1520	39	41	41	42	42	49.9	49.0	44.4	47.8

Location Mean 2942 2690

Table 2. 2001 Quincy Elite Triticale Nursery Summary, Sorted by Yield

Cooperator: R. Barnett & L. Schell			Location: Quincy		Yield CV%: 23.2		
No. of Reps: 3		Harvest Plot Area (sq.ft.): 60			Yield LSD (.05): 1015		
Fertilizer: 75-50-75 lbs/A		Seed Date: Nov 30, 2000					
Date/Fees/Growth Stage When Scored							
ENTRY NO.	CULTIVAR/ DESIGNATION	YIELD bu/A	RANK IN YIELD	TEST WT. lbs/bu	10.1 HEADING DATE Julian	1-May HEIGHT in.	26-May LODGING
11	91142-A19 F8	4058	1	53.1	82	51	0.3
34	29ITYN45	3664	2	56.0	70	39	0.3
35	30ITYN4	3657	3	55.7	69	40	0.0
4	94128-Y1-A5 F8	3625	4	53.8	84	52	0.3
5	94128-Y1-A8 F8	3538	5	52.5	74	49	0.3
20	AGS 2000	3509	6	58.6	90	39	0.0
8	91142-P1-A1 F9	3485	7	52.5	82	51	0.0
9	91142-A2 F8	3465	8	54.7	83	52	0.3
31	90T60-13-B3-03	3344	9	53.1	85	54	0.3
3	93039-P1-A11 F8	3294	10	52.5	81	44	0.3
14	91236-A12 F8	3286	11	49.6	71	43	0.3
30	28ITYN13	3192	12	50.9	72	43	0.3
38	PFT 701	3185	13	56.3	82	43	0.0
2	91211-W7-Y2-A11 F10	3054	14	49.6	75	47	0.0
29	92 TO 049-X1-Y2	2991	15	52.5	83	42	1.0
25	FL26ITYN11	2981	16	56.0	69	38	1.7
13	91168-A11 F8	2952	17	52.5	69	47	0.7
28	28ITYN16	2880	18	52.5	72	41	0.3
27	86T27-E13-G8	2814	19	53.4	81	40	0.0
26	Florico	2812	20	53.8	68	42	2.0
23	FL89219-X7-G8	2756	21	57.6	83	53	0.7

Table 2. 2001 Quincy Elite Triticale Nursery Summary, Sorted by Yield

ENTRY NO.	CULTIVAR/ DESIGNATION	Date/Feebles Growth Stage When Scored				10.1		1-May		26-May
		YIELD	RANK IN YIELD	TEST WT.	HEADING DATE	HEIGHT	LOGGING			
		bu/A		lbs/bu	Julian	in.				
42	Arcia	2739	22	52.8	90	48			0-9	0.0
24	FL26ITYN153	2621	23	54.1	66	40			0.0	0.0
10	PFT215	2604	24	57.9	73	45			0.0	0.0
41	90076-W1-X1, awnless	2558	25	52.5	75	52			0.7	0.0
37	K6045-12, Brazil	2524	26	56.6	68	46			1.0	0.0
18	M98-1950-1	2522	27	55.4	93	47			0.0	0.0
6	91214-X2-Y2-Z1-A3 F9	2464	28	53.8	91	53			0.0	0.0
7	88T123-E10-5-B1-Y3-Z2-A2	2449	29	53.8	88	53			0.0	0.0
21	M98-2084	2439	30	55.0	91	38			2.3	0.0
12	91144-A20 F8	2297	31	51.8	73	42			0.3	0.0
39	89271-W2-Y2-Z1-A4	2270	32	48.6	74	50			1.0	0.0
33	89T115-X21-Y1-A3 F9	2224	33	48.6	80	45			0.7	0.0
19	M98-1952-2	2103	34	53.4	91	48			0.3	0.0
40	Musky	1931	35	56.0	97	48			0.0	0.0
16	Sunland	1835	36	57.9	82	44			0.0	0.0
1	KT970046p7050	1764	37	55.4	91	50			0.0	0.0
32	26ITYN12	1757	38	55.0	69	42			1.0	0.0
22	VN98-4	1449	39	47.4	103	36			0.0	0.0
17	M98-1916	1404	40	52.8	98	31			0.0	0.0
36	81-437T SPS, Australia	1254	41	49.0	104	51			0.0	0.0
15	M98-1939	1252	42	51.8	98	46			0.0	0.0

LOCATION MEAN:

2690

0.4

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Table 3. 2001 Marianna Elite Triticale Nursery Summary, Sorted by Yield

Cooperator: R. Barnett & L. Schell				Location: Marianna		Yield CV%: 9.58	
No. of Reps: 3		Harvest Plot Area (sq.ft.): 60				Yield LSD (.05): 458	
Fertilizer: 75-50-75 lbs/A		Seed Date: Nov 16, 2000					
Date/Fees Growth Stage When Scored							
ENTRY NO.	CULTIVAR/ DESIGNATION	YIELD bu/A	RANK IN YIELD	TEST WT. lbs/bu	10.1 HEADING DATE Julian	6-Jun HEIGHT in.	6-Jun LODGING
33	89T115-X21-Y1-A3 F9	4417	1	49.9	69	44.0	0.9
31	90T60-13-B3-03	4339	2	52.4	71	49.0	1.0
20	AGS 2000	4286	3	58.8	85	37.7	0.7
5	94128-Y1-A8 F8	4242	4	52.4	71	47.7	1.0
11	91142-A19 F8	4051	5	50.8	71	43.0	0.7
34	29ITYN45	3821	6	56.3	65	33.0	0.3
9	91142-A2 F8	3681	7	52.4	70	47.0	2.0
28	28ITYN16	3669	8	52.4	65	35.3	0.0
35	30ITYN4	3661	9	56.3	65	33.3	0.7
12	91144-A20 F8	3654	10	51.2	68	39.3	0.7
14	91236-A12 F8	3652	11	49.6	66	32.3	0.3
30	28ITYN13	3511	12	52.4	65	35.7	1.3
2	91211-W7-Y2-A11 F10	3456	13	48.9	71	44.0	0.3
24	FL26ITYN153	3403	14	52.4	63	35.0	0.0
26	Florico	3332	15	53.7	64	40.3	3.7
4	94128-Y1-A5 F8	3301	16	51.8	78	50.0	1.3
38	PFT 701	3245	17	56.3	70	37.7	0.3
41	90076-W1-X1, awnless	3233	18	52.4	71	47.7	1.3
27	86T27-E13-G8	3122	19	53.7	69	39.7	0.0
29	92 TO 049-X1-Y2	3100	20	53.7	67	40.3	1.7
37	K6045-12, Brazil	3095	21	56.3	63	39.3	2.0

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Table 3. 2001 Marianna Elite Triticale Nursery Summary, Sorted by Yield

Date/Feekes Growth Stage When Scored		10.1				6-Jun	6-Jun
ENTRY NO.	CULTIVAR/ DESIGNATION	YIELD bu/A	RANK IN YIELD	TEST WT. lbs/bu	HEADING DATE Julian	HEIGHT in.	LOGGING
8	91142-P1-A1 F9	3090	22	51.2	71	48.3	0-9
13	91168-A11 F8	3047	23	51.8	64	39.3	1.0
3	93039-P1-A11 F8	3032	24	49.9	71	40.3	1.7
23	FL89219-X7-G8	2926	25	56.3	72	48.3	1.7
25	FL261TYN11	2902	26	53.7	61	37.0	2.3
39	89271-W2-Y2-Z1-A4	2885	27	48.6	69	45.7	3.3
16	Sunland	2776	28	57.6	67	39.0	1.7
32	261TYN12	2727	29	55.0	62	36.0	0.7
10	PFT215	2614	30	57.2	70	38.3	2.3
6	91214-X2-Y2-Z1-A3 F9	2502	31	54.7	85	49.3	0.3
7	88T123-E10-5-B1-Y3-Z2-A2	2446	32	54.0	84	47.0	0.0
42	Arcia	2163	33	51.2	78	44.7	1.0
22	VN98-4	1951	34	42.2	99	32.0	2.0
1	KT970046p7050	1943	35	54.1	86	47.3	0.0
19	M98-1952-2	1876	36	52.4	81	44.7	1.0
18	M98-1950-1	1803	37	53.7	84	43.7	1.7
21	M98-2084	1767	38	52.4	85	36.0	2.0
36	81-437T SPS, Australia	1309	39	49.9	99	49.0	6.3
17	M98-1916	1229	40	51.2	90	28.0	0.0
15	M98-1939	1195	41	53.7	97	43.0	0.0
40	Musky	1118	42	52.4	93	47.3	0.3
LOCATION MEAN:		2942				41.3	1.2

2000-2001 Small Grains Performance Tests

The Georgia Agricultural Experiment Station
College of Agricultural and Environmental Sciences
The University of Georgia
Research Report Number 673

**Table 4. Tifton, Georgia:
Triticale Grain Performance, 2000-2001**

Brand-Variety	Yield ¹		Rank	2001 Data					
	3-Year	2-Year		Yield ¹	Test	Ht	Lodg.	Winter Survival	Head Date
	Avg	Avg			Wt				
	--- bu/acre ---			bu/acre	lb/bu	in	%	%	mo/day
FLPFT215	93.3	100.3	4	117.5	57.2	48	6	100	03/22
Sunland	84.9	87.6	10	109.1	57.4	47	15	100	03/19
TRICAL 498	84.0	88.1	16	93.6	48.3	47	6	100	03/29
Fleming *	61.7	62.6	19	73.4	57.5	41	4	100	03/27
GA29ITYN45	.	.	1	124.1	55.1	44	0	100	03/16
FL91142-A2	.	.	2	122.8	54.1	54	20	100	03/20
FL91142-P1-A1	.	.	3	119.4	51.9	52	11	100	03/20
FL91144-A20	.	.	5	112.6	51.3	49	1	100	03/18
FL91242-X1-Y1-Z1	.	.	6	111.7	51.0	50	6	100	03/26
FL91168-A11	.	.	7	110.9	52.5	49	1	100	03/15
FL93039-P1-A11	.	.	8	109.7	49.8	50	3	100	03/25
FL91211-W7-Y2-A11	.	.	9	109.7	49.3	52	6	100	03/25
GA86T27-E13-G8	.	.	11	108.5	53.6	49	3	100	03/21
K6045-12	.	.	12	108.1	56.2	49	6	100	03/15
GA89T115-X4-Y1-Z2	.	.	13	103.0	50.5	56	18	100	03/24
FLPFT701	.	.	14	97.2	54.5	47	4	100	03/21
FL94128-Y1-A8	.	.	15	96.4	52.1	53	15	100	03/26
FL89271-W2-Y2-Z1-A4	.	.	17	89.3	49.3	54	11	100	03/17
FL90076-W1-X1	.	.	18	78.8	51.2	55	16	100	03/21
Arcia	.	67.1	20	64.9	49.7	49	11	100	04/02
FL81-437	.	.	21	60.2	47.1	60	16	100	04/15
M98-1950-1	.	.	22	54.1	50.6	52	14	100	04/07
Musky	.	.	23	37.3	49.8	53	11	100	04/11
Average	81.0	81.2		96.2 ³	52.2	50	9	100	03/25
LSD at 10% Level	3.1	N.S. ⁴		9.0	0.7	1	9	-	02
Std. Err. of Entry Mean	1.3	1.5		3.8	0.3	1	4	-	01

* Wheat check variety.

1. Yields calculated as 48 pounds per bushel at 13.0% moisture.

2. Percentage on head.

3. C.V. = 8.0%, and df for EMS = 66.

4. The F-test indicated no statistical difference at the alpha = 0.1 probability level; therefore, an LSD value was not calculated.

Bolding indicates entries yielding equal to highest yielding entry within a column based on Fisher's protected LSD (P = 0.10).

Planted: November 27, 2000.

Harvested: May 28, 2001.

Seeding Rate: 16 seeds per foot in 7" rows.

Soil Type: Tifton loamy sand.

Soil Test: P = High, K = Medium, and pH = 6.2.

2000-2001 Small Grains Performance Tests

The Georgia Agricultural Experiment Station
College of Agricultural and Environmental Sciences
The University of Georgia
Research Report Number 673

**Table 5. Plains, Georgia:
Triticale Grain Performance, 2000-2001**

Brand-Variety	Yield ¹		Rank	2001 Data					
	3-Year	2-Year		Yield ¹	Test	Ht	Lodg.	Winter Survival	Head Date
	Average	Average			Wt				
	-----	-----		bu/acre	lb/bu	in	%	%	mo/day
Sunland	82.5	85.4	11	77.9	58.7	46	68	100	03/29
FLPFT215	79.8	81.5	15	72.7	58.2	46	50	100	03/30
TRICAL 498	75.8	81.8	14	76.4	51.8	46	60	100	04/06
Fleming *	65.4	70.3	19	66.4	65.5	37	8	100	04/06
FL93039-P1-A11	.	.	1	100.6	52.3	49	65	100	04/02
GA29ITYN45	.	.	2	98.3	57.4	44	38	100	03/23
FLPFT701	.	.	3	94.8	58.7	43	33	100	03/31
GA86T27-E13-G8	.	.	4	93.2	54.6	46	45	100	04/01
FL94128-Y1-A8	.	.	5	92.2	53.9	54	70	100	04/05
FL91142-P1-A1	.	.	6	89.2	52.4	50	80	100	03/27
FL91168-A11	.	.	7	89.0	54.3	49	68	100	03/27
FL91144-A20	.	.	8	82.9	55.5	49	58	100	03/31
FL91242-X1-Y1-Z1	.	.	9	82.1	55.0	49	65	100	04/03
FL91142-A2	.	.	10	81.9	56.7	51	91	100	03/30
GA89T115-X4-Y1-Z2	.	.	12	77.9	53.4	52	98	100	04/02
FL90076-W1-X1	.	.	13	77.1	56.7	52	65	100	03/30
K6045-12	.	.	16	72.7	56.7	49	66	100	03/23
FL89271-W2-Y2-Z1-A4	.	.	17	72.2	51.4	53	73	100	03/28
FL91211-W7-Y2-A11	.	.	18	69.0	50.0	49	80	100	04/05
Arcia	.	66.0	20	62.9	52.6	46	85	100	04/08
Musky	.	.	21	42.9	50.9	51	93	100	.
FL81-437	.	.	22	41.9	49.1	59	84	100	.
M98-1950-1	.	.	23	36.1	45.7	48	100	100	04/11
Average	75.9	77.0		76.1 ²	54.4	48	67	100	04/01
LSD at 10% Level	4.5	5.3		9.9	3.4	2	26	-	02
Std. Err. of Entry Mean	3.2	2.2		4.2	1.3	1	11	-	01

* Wheat check variety.

1. Yields calculated as 48 pounds per bushel at 13.0% moisture.

2. C.V. = 11.0%, and df for EMS = 66.

Bolding indicates entries yielding equal to highest yielding entry within a column based on Fisher's protected LSD (P = 0.10).

Planted: November 28, 2000

Harvested: June 18, 2001.

Seeding Rate: 16 seeds per foot in 7" rows.

Soil Type: Greenville sandy clay loam.

2000-2001 Small Grains Performance Tests

The Georgia Agricultural Experiment Station
College of Agricultural and Environmental Sciences
The University of Georgia
Research Report Number 673

**Table 6. Midville, Georgia:
Triticale Grain Performance, 2000-2001**

Brand-Variety	Yield ¹		Rank	2001 Data					
	3-Year	2-Year		Yield ¹	Test	Ht	Lodg.	Winter Survival	Head Date
	Average	Average			Wt				
	-----	-----		bu/acre	lb/bu	in	%	%	mo/day
FLPFT215	46.9	41.2	4	47.5	52.7	34	0	100	.
Sunland	46.8	36.4	10	43.3	52.3	34	0	100	.
TRICAL 498	44.9	33.2	18	36.1	42.9	33	0	100	.
Fleming *	42.4	36.6	17	37.3	54.5	27	0	100	.
FL91144-A20	.	.	1	52.4	46.4	39	0	100	.
K6045-12	.	.	2	51.7	50.1	40	0	100	.
GA29ITYN45	.	.	3	49.5	46.6	32	0	100	.
GA86T27-E13-G8	.	.	5	47.4	46.7	37	0	100	.
FL91211-W7-Y2-A11	.	.	6	47.0	45.6	37	0	100	.
FL91142-A2	.	.	7	45.9	45.6	40	0	100	.
FLPFT701	.	.	8	45.7	50.9	34	0	100	.
Arcia	.	36.0	9	43.7	46.8	36	0	100	.
GA89T115-X4-Y1-Z2	.	.	11	43.2	43.8	40	0	100	.
FL90076-W1-X1	.	.	12	42.6	47.4	40	0	100	.
FL91142-P1-A1	.	.	13	42.3	44.3	38	0	100	.
FL91168-A11	.	.	14	40.7	46.9	36	0	100	.
FL94128-Y1-A8	.	.	15	40.3	44.7	43	0	100	.
FL91242-X1-Y1-Z1	.	.	16	37.7	46.7	35	0	100	.
FL89271-W2-Y2-Z1-A4	.	.	19	35.9	42.9	41	0	100	.
FL93039-P1-A11	.	.	20	34.6	41.9	36	0	100	.
M98-1950-1	.	.	21	34.2	47.6	36	0	100	.
Musky	.	.	22	28.9	49.6	39	0	100	.
FL81-437	.	.	23	18.2	45.2	38	0	100	.
Average	45.2	36.7		41.1 ²	47.0	37	0	100	.
LSD at 10% Level	N.S. ³	N.S.		8.4	2.5	3	-	-	-
Std. Err. of Entry Mean	1.8	2.0		3.6	1.1	1	-	-	-

* Wheat check variety.

1. Yields calculated as 48 pounds per bushel at 13.0% moisture.

2. C.V. = 17.4%, and df for EMS = 66.

3. The F-test indicated no statistical difference at the alpha = 0.1 probability level; therefore, an LSD value was not calculated.

Bolding indicates entries yielding equal to highest yielding entry within a column based on Fisher's protected LSD (P = 0.10).

Planted: December 1, 2001.

Harvested: June 6, 2001.

Seeding Rate: 16 seeds per foot in 7" rows.

2000-2001 Small Grains Performance Tests

The Georgia Agricultural Experiment Station
College of Agricultural and Environmental Sciences
The University of Georgia
Research Report Number 673

**Table 7. Summary of Triticale Yields:
Georgia, 2000-2001 with Two-
and Three-Year Averages**

Brand-Variety	Yield ¹		
	South ²		
	2001	2-Year Average	3-Year Average
	----- bu/acre -----		
Arcia	57.2	62.0	.
FL81-437	40.1	.	.
FL89271-W2-Y2-Z1-A4	65.8	.	.
FL90076-W1-X1	66.1	.	.
FL91142-A2	83.5	.	.
FL91142-P1-A1	83.7	.	.
FL91144-A20	82.6	.	.
FL91168-A11	80.2	.	.
FL91211-W7-Y2-A11	75.2	.	.
FL91242-X1-Y1-Z1	77.1	.	.
FL93039-P1-A11	81.6	.	.
FL94128-Y1-A8	76.3	.	.
Fleming *	59.0	60.6	59.1
FLPFT215	79.2	82.2	78.1
FLPFT701	79.2	.	.
GA29ITYN45	90.6	.	.
GA86T27-E13-G8	83.0	.	.
GA89T115-X4-Y1-Z2	74.7	.	.
K6045-12	77.5	.	.
M98-1950-1	41.5	.	.
Musky	36.4	.	.
TRICAL 498	68.7	75.2	73.0
Sunland	76.7	77.9	76.6
Average	71.1	71.6	71.7
LSD at 10% Level	10.9	4.7	6.6
Std. Err. of Entry Mean	4.7	2.6	1.9

* Wheat check variety.

1. Yields calculated at 48 pounds per bushel at 13.0% moisture.

2. Tifton, Plains, and Midville.

Bolding indicates entries yielding equal to highest yielding entry within a column based on Fisher's protected LSD (P = 0.10).

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE**EXHIBIT E**
STATEMENT OF THE BASIS OF OWNERSHIP

Application is required in order to determine if a plant variety protection certificate is to be issued (7 U.S.C. 2421). The information is held confidential until the certificate is issued (7 U.S.C. 2426).

1. NAME OF APPLICANT(S)

Florida Agricultural Experiment Station &
~~University of Georgia Research Foundation~~
University of Georgia Research Foundation2. TEMPORARY DESIGNATION
OR EXPERIMENTAL NUMBER

FL94128-Y1-A8

3. VARIETY NAME

Monarch

4. ADDRESS (Street and No., or R.F.D. No., City, State, and ZIP, and Country)

Office for Dean of Research
University of Florida
P.O. Box 110200
Gainesville, Florida 32611-0200

5. TELEPHONE (Include area code)

(352) 392-1784

6. FAX (Include area code)

(352) 392-4965

7. PVPO NUMBER

260500049

8. Does the applicant own all rights to the variety? Mark an "X" in the appropriate block. If no, please explain.

☒ YES☐ NO

9. Is the applicant (individual or company) a U.S. national or a U.S. based company? If no, give name of country.

☒ YES☐ NO

10. Is the applicant the original owner?

☒ YES☐ NOIf no, please answer one of the following:

a. If the original rights to variety were owned by individual(s), is (are) the original owner(s) a U.S. National(s)?

☒ YES☐ NO

If no, give name of country

b. If the original rights to variety were owned by a company(ies), is (are) the original owner(s) a U.S. based company?

☒ YES☐ NO

If no, give name of country

11. Additional explanation on ownership (Trace ownership from original breeder to current owner. Use the reverse for extra space if needed):

Florida Foundation Seed Producers, Inc. (FFSP) has been designed and authorized to produce breeder and foundation seed of Monarch. Only companies with approved contracts with FFSP are authorized to produce and sell seed of Monarch triticale.

PLEASE NOTE:

Plant variety protection can only be afforded to the owners (not licensees) who meet the following criteria:

1. If the rights to the variety are owned by the original breeder, that person must be a U.S. national, national of a UPOV member country, or national of a country which affords similar protection to nationals of the U.S. for the same genus and species.
2. If the rights to the variety are owned by the company which employed the original breeder(s), the company must be U.S. based, owned by nationals of a UPOV member country, or owned by nationals of a country which affords similar protection to nationals of the U.S. for the same genus and species.
3. If the applicant is an owner who is not the original owner, both the original owner and the applicant must meet one of the above criteria.

The original breeder/owner may be the individual or company who directed the final breeding. See Section 41(a)(2) of the Plant Variety Protection Act for definitions.

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0581-0055. The time required to complete this information collection is estimated to average 0.1 hour per response, including the time for reviewing the instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, gender, religion, age, disability, sexual orientation, marital or family status, political beliefs, parental status, or protected genetic information. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at 202-720-2600 (voice and TDD).

To file a complaint of discrimination, write USDA, Director, Office of Civil Rights, Room 326-W, Whitten Building, 14th and Independence Avenue, SW, Washington, D.C. 20250-9410 or call (202) 720-5964 (voice and TDD). USDA is an equal opportunity provider and employer.

Exhibit E**Statement of the Basis of the Owner's Ownership**

The variety for which plant protection is hereby sought is owned jointly by the Florida Agricultural Experiment Station (FAES) and the University of Georgia Research Foundation, Inc. (UGARF).

Ronald D. Barnett, Paul Pfahler, and Ann Blount, as employees of the FAES have assigned their rights in "Monarch" to FAES.

Ownership of UGARF in the variety for which protection is sought is based on the Patent Policy approved by the Board of Regents of the University System of Georgia on June 8, 1982, in which the Board of Regents assigned to the University of Georgia Research Foundation, Inc. all rights in intellectual property developed or created by employees at the University of Georgia, one of the universities of the University System of Georgia. Rights in novel plant varieties developed at the University of Georgia, including "Monarch" are co-owned by said patent policy. As employees of the University of Georgia, Jerry Johnson, Barry Cunfer and David Buntin have assigned their rights to "Monarch" to the University of Georgia Research Foundation, Inc.

Florida Foundation Seed Producers, Inc. (FFSP) has been designated and authorized to produce breeder and foundation seed of Monarch for commercial distribution. Only companies with approved contracts with FFSP are authorized to produce and sell seed of Monarch.